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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,421	05/17/2005	Mario Magaldi	IPS-103	6309
2387	7590	05/01/2007		
OLSON & HIERL, LTD. 20 NORTH WACKER DRIVE 36TH FLOOR CHICAGO, IL 60606			EXAMINER RINEHART, KENNETH	
			ART UNIT 3749	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/510,421

Applicant(s)

MAGALDI, MARIO

Examiner

Kenneth B. Rinehart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Response to Arguments***

Applicant's arguments filed 3/15/07 have been fully considered but they are not persuasive. The applicant argues the examiner's testimony is unsupported regarding the temperature of the plates being representative of the temperature of the material. The examiner disagrees. The examiner does not believe it is unreasonable for the reference to read on the broad claim language of the term "representative". Regarding the applicant's comments concerning Magaldi in view of Bernard, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. A similar response applies to applicant's arguments of Magaldi in view of Magaldi.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magaldi (WO 97/00406). Magaldi discloses A conveyor/cooler of solid hot loose materials generated by boilers and by various industrial processes, mainly comprising a sealed metal container connected to a combustion chamber of a boiler or an incinerator (12, 16, fig. 1), and defining at least one air intake port (page 9, lines 8-11, opening to right of 16), wherein a metal conveyor belt in the metal container for collecting (14, fig. 1) the hot loose material deposited thereon due to gravitational effect upon leaving the combustion chamber and (20, fig. 1), forming a traveling

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continuous bed of material, and nozzles in the metal container positioned ... the metal bed and defining an ... water sprinkling system, wherein cooling is carried out through the joint feeding of atomized water jets from the nozzles ... the continuous bed of the hot loose material and air (page 10, lines 12-13) and air flows over the continuous bed of the hot loose material (fig. 1), in that the conveyor belt includes a regenerative heat exchanger which absorbs the heat from the material during travel toward an unloading area and it gives it up to the air in the return run (col. 8, line 11), device is adapted for installation underneath the boilers or incinerators wherein the combustion occurs either under vacuum or pressure with respect to the outer atmosphere (fig. 1, fig. 2, col. 4, lines 14-18), that the device allows the recovery of thermal energy taken from the hot material when it operates under vacuum; said recovery takes place by introducing the heated air with the heat given up by the material into the combustion chamber of the boiler by thus mixing it to the main combustion air (claim 6), in that the intake air capacity into the metal container from air intake ports can be adjusted in order to optimize the cooling (page 8, lines 5-7), that a scraping conveyor with chains or with a metal net is provided in order to scrape the material's dust from the bottom of the container, wherein is deposited and is conveyed towards an unloading area (30, fig. 1), the capacity of the nozzles, the intervention sequence and the duration of the activation are defined according to the temperature of the material and according to the level of the capacity of the same material, inside the metal container some temperature sensors are installed whose signals are used in order to adjust the operation of the atomized water sprinkling system. (col. 10, lines 13-19, the temperature of the plate is representative of the temperature of the material.). Magildi discloses applicant's invention substantially as claimed with the exception of above, onto, the number of nozzles therein, their piano-volumetric

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arrangement inside of the metal container and the type of each single nozzle, are preset according to the chemical-physical characteristics of the conveyed material, according to the capacity of the same material and according to the desired cooling degree.. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the location of the nozzles, since shifting the location of the parts of a device involves only routine skill in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have nozzles of a certain type, number, and location, since discovering optimum values for a material involves only routine skill in the art.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Magaldi as applied to claim 8 above, and further in view of (FR 2731064). Magaldi discloses applicant's invention substantially as claimed with the exception of the spraying angle of the nozzles must be such to cover the entire surface of the traveling bed formed by the hot material. FR 2731064 teaches the spraying angle of the nozzles must be such to cover the entire surface of the traveling bed formed by the hot material (fig. 3) for the purpose of more effectively cooling the material. It would have been obvious to one of ordinary skill in the art to modify Magaldi by including the spraying angle of the nozzles must be such to cover the entire surface of the traveling bed formed by the hot material as taught by FR 2731064) for the purpose of more effectively cooling the material to provide for a more effective apparatus that can process material in a faster manner.

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magaldi as applied to claim 1 above and further in view of (EP0931981). Magaldi discloses applicant's invention substantially as claimed with the exception of the plates of the metal conveyor belt can be equipped with appropriate slots in order to allow the passage of the cooling air flow through

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the whole layer of the continuous bed formed by the hot loose material traveling above said metal belt, the geometry, the number and the arrangement of the slots made in the plates of the metal conveyor belt must be defined as a function of the type, the amount and mainly with respect to the grain size of the conveyed material so as to avoid that this latter would leak and fall to the bottom of the metal container that it is possible to adjust the fraction of the cooling air flow which runs through the slots made on the plates of the metal belt, with respect to the specific cooling needs and to the possible presence of unburnt matter. Magaldi (EP931981) teaches the plates of the metal conveyor belt can be equipped with appropriate slots in order to allow the passage of the cooling air flow through the whole layer of the continuous bed formed by the hot loose material traveling above said metal belt, the geometry, the number and the arrangement of the slots made in the plates of the metal conveyor belt must be defined as a function of the type, the amount and mainly with respect to the grain size of the conveyed material so as to avoid that this latter would leak and fall to the bottom of the metal container that it is possible to adjust the fraction of the cooling air flow which runs through the slots made on the plates of the metal belt, with respect to the specific cooling needs and to the possible presence of unburnt matter (col. 3, lines 45-60, col. 4, lines 1-20) for the purpose of obtaining desired thermal behavior. It would have been obvious to one of ordinary skill in the art to modify Magaldi by including the plates of the metal conveyor belt can be equipped with appropriate slots in order to allow the passage of the cooling air flow through the whole layer of the continuous bed formed by the hot loose material traveling above said metal belt, the geometry, the number and the arrangement of the slots made in the plates of the metal conveyor belt must be defined as a function of the type, the amount and mainly with respect to the grain size of the

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conveyed material so as to avoid that this latter would leak and fall to the bottom of the metal container that it is possible to adjust the fraction of the cooling air flow which runs through the slots made on the plates of the metal belt, with respect to the specific cooling needs and to the possible presence of unburnt matter as taught by Magaldi for the purpose of obtaining desired thermal behavior so the apparatus will operate more efficiently.

***Allowable Subject Matter***

Claims 12-15 are allowed.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Rinehart whose telephone number is 571-272-4881. The examiner can normally be reached on 7:20 -4:20.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

kbr

  
**KENNETH RINEHART**  
**PRIMARY EXAMINER**